# service handbook chapter

hp e-pc <u>c10 /</u> s10

hp business pcs

www.hp.com/e-pcsupport



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Tr	us chapter provides:
	Product model numbers
	Supported Accessories
	System Board, BIOS, and memory information
	Part numbers

### replacement and exchange parts

The difference between a replacement and an exchange part is that when using an exchange part you should return the replaced part to HP.

Replacement and exchange parts listed in this manual are subject to change. However, updated part numbers are automatically cross-referenced to the old number. This means that you will receive the correct part using the numbers listed in this manual (even if the part's actual number has been updated).

### ordering parts

Contact your local HP Customer Care Center or an HP Authorized support provider to get parts. Diagnostic is required in both cases, prior to any shipments. For HP Customer Care Centers

www.hp.com/go/e-pcsupport and select contact hp

### models and accessories

Product Number	Model	Hard Drive	Std. RAM	Multimedia	os¹
	•	HPe	pc c10/s10		
		dels with Inte		,	
133 M	Hz Syste	em Bus Speed,	and 256 KF	B Level 2 Cache Memo	ry
	Н	P e-pc 800EB/1	<b>33-256</b> (CP	L: 11/2000 ▶)	
P2324C	c10	10 GB IDE	64 MB SDRAM	24 × Max Slim IDE CD-ROM	W98
P2327A	s10	20 GB IDE	128 MB		
P2763A/T	s10	10 GB IDE	SDRAM		
P2764T	s10				
P2765A/T	s10	20 GB IDE			W2000
P2788C	c10	10 GB IDE		No	
P2793A/T	c10			24 X Max Slim IDE	
P2794A	c10			CD-ROM	W98
P3357T	c10		64 MB SDRAM		
P3358T	s10		128 MB SDRAM		
P3360T	s10	20 GB IDE	256 MB SDRAM		W2000
P3361T	s10	10 GB IDE	128 MB		W2000
P3362A/T	s10		SDRAM		W98
P3363A	c10		256 MB SDRAM		NT4 WS



Product Number	Model	Hard Drive	Std. RAM	Multimedia	os <sup>1</sup>	
	I	HP e-pc 866/13	<b>3-256</b> (CPL:	11/2000 ▶)		
A7578A	c10	20 GB IDE	128 MB	24 X Max Slim IDE	W2000	
A7579A	c10		SDRAM	CD-ROM		
P2321A/T	s10				W98	
P2325C	s10					
P2328A/B	s10					
P2767T/U	c10	10 GB IDE				
P2768T/U	c10				W2000	
P2789C	c10	20 GB IDE				
P2795A/T	c10		256 MB SDRAM			
P3372W	c10		128 MB		W2000	
P3373A	c10		SDRAM		W98	
P3375A/T	s10				W2000	
P3381W	c10		256 MB SDRAM	No	W98	
P4229A/T	c10		128 MB	24 X Max Slim IDE	W2000	
P4230A/T	c10	7	SDRAM	CD-ROM	W98	
P4232C	c10			No	W2000	
P4233C	s10		64 MB SDRAM	24 X Max Slim IDE CD-ROM	W98	
P4256A/T	s10			SDDAM		
P4265A	s10				SDRAM	8 X Max Slim IDE DVD-ROM
P4269A	s10			24 X Max Slim IDE CD-ROM		



Product Number	Model	Hard Drive	Std. RAM	Multimedia	os¹		
<b>HP e-pc 933/133-256</b> (CPL: 01/2001 ▶)							
P3376A/C/T	c10	20 GB IDE	128 MB	24 X Max Slim IDE	W2000		
P3378C	c10		SDRAM	CD-ROM	W98		
P3380C	c10	-			W2000		
P4226A/B/C	s10				W98		
P4258A/T	c10		256 MB SDRAM		W2000		
P4263A/T	c10		128 MB		W98		
P4270T	s10		SDRAM				
P4280C	c10			No	W2000		
P4938A	c10			4X4X24X Max Slim IDE CD-RW	W98		
P4943T	c10		24 X Max Slim IDE CD-ROM				
	Н	P e-pc 1000/1	33-256 (CPL	:: 03/2001 ▶)			
A7586S	c10	40 GB IDE	256 MB	24 X Max Slim IDE	W98		
A7643S	c10		SDRAM	CD-ROM	W2000		
A7646S	c10	20 GB IDE					
A7647S	c10	40 GB IDE					
P4266A/T	c10	20 GB IDE					
P4267A	s10		128 MB				
P4268A	s10		SDRAM		W98		
P4275T	s10				W2000		
P4276A/T	c10	40 GB IDE	256 MB SDRAM				
P4277A/T	c10	20 GB IDE	128 MB				
P4278A	c10		SDRAM		W98		
P4279C	c10				W2000		
P4935C	c10	40 GB IDE					
P4947A/C	c10	20 GB IDE		No	W98		
P4955C	c10		64 MB SDRAM	24 X Max Slim IDE CD-ROM			



Product Number	Model	Hard Drive	Std. RAM	Multimedia	os <sup>1</sup>		
P4956T	c10	40 GB IDE	256 MB SDRAM	4X4X24X Max Slim IDE CD-RW	W2000		
P4957W	c10	20 GB IDE		24 X Max Slim IDE CD-ROM	W98		
		HP e	e-pc c10/s10				
66 or 100		lodels with Int stem Bus Spec		Processor, KB Level 2 Cache Me	emory		
	]	HP e-pc 566/66	6-128 (CPL:	11/2000 •)			
P2707T #104	s10	8.4 GB IDE	128 MB SDRAM	No	W98		
	]	HP e-pc 633/66	6-128 (CPL:	11/2000 ▶)			
P2292A/T	s10	10 GB IDE	64 MB	24 X Max Slim IDE	W98		
P2322C	s10		SDRAM	CD-ROM			
P2760A/T	s10						
P2761A/T	s10		128 MB SDRAM		W2000		
P2790A	c10		64 MB		W98		
P2791A/C/T	c10		SDRAM	No			
P3354T	c10			24 X Max Slim IDE			
P3355A	c10		128 MB	CD-ROM	W2000		
P3364T	s10		SDRAM				
	<b>HP e-pc 667/66-128</b> (CPL: 02/2001 ▶)						
P3383A/C	s10	20 GB IDE	64 MB SDRAM	24 × Max Slim IDE CD-ROM	W98		
P4227A/C	c10			No			



Product Number	Model	Hard Drive	Std. RAM	Multimedia	os <sup>1</sup>
		HP e-pc 700/60	6-128 (CPL:	11/2000 ▶)	
P2320A/T	s10	10 GB IDE	128 MB SDRAM	24 X Max Slim IDE CD-ROM	W98
P2323C	c10		64 MB		
P2326A/T	s10		SDRAM		
P2762T	s10	20 GB IDE	128 MB SDRAM		W2000
P2766A/T/U	c10	10 GB IDE	64 MB SDRAM		W98
P2792A/C/T/U	c10		128 MB		
P3356T	c10		SDRAM		
P3374A	s10	20 GB IDE			
P3377A/C	s10		64 MB		W98
P3379A/C	s10		SDRAM	No	W98
P3382A	c10	10 GB IDE		24 X Max Slim IDE	
P4225A	s10	20 GB IDE	128 MB	CD-ROM	
P4228A	c10		SDRAM		
P4264A	c10				
P4271A	c10				W2000
P4273A	s10				
P4274A/T	s10	10 GB IDE	64 MB		
P4939T	c10	20 GB IDE	SDRAM		W98
P4940T	c10		128 MB SDRAM		
		HP e-pc 733/60	6-128 (CPL:	02/2001 •)	•
P4257A	c10	10 GB IDE	64 MB	No	W98
P4952A	c10	20 GB IDE	SDRAM	24 X Max Slim IDE CD-ROM	



Product Number	Model	Hard Drive	Std. RAM	Multimedia	os <sup>1</sup>
		HP e-pc 766/60	6-128 (CPL:	03/2001 •)	
P4259T	c10	10 GB IDE	64 MB	No	W98
P4260T	s10	20 GB IDE	SDRAM	24 X Max Slim IDE	
P4261A/T/W	c10	10 GB IDE	128 MB	CD-ROM	
P4262T	s10	20 GB IDE	SDRAM		W2000
P4272A/T/W	c10				W98
P4936A/C	s10		64 MB SDRAM		
P4941A/T	c10		128 MB		W2000
P4242A	c10		SDRAM No	W98	
P4944T	c10		64 MB SDRAM	24 X Max Slim IDE CD-ROM	
P4945T	c10		128 MB SDRAM		W2000
P4946A/C/T	c10		64 MB SDRAM	No	W98
P4948A	c10	-	128 MB SDRAM	24 X Max Slim IDE CD-ROM	
P4949A/T	c10			No	
	I	HP e-pc 800/10	0-128 (CPL:	06/2001 •)	
P4953C	s10	20 GB IDE	64 MB SDRAM	24 X Max Slim IDE CD-ROM	W98
P4954C	c10			No	

<sup>1.</sup> Operating system preloaded on these models, as indicated in the table. W98 = Windows 98, W2000 = Windows 2000 Professional, NT4 WS = Windows NT4 Workstation.

### note

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Direct AGP video controller integrated in Intel chipset
Integrated Crystal CS4299 Audio Codec '97 2.1 compatible stereo audio codec
Integrated 3Com 3C905C-TX network controller.



### supported accessories

Input Devices	
HP Standard Keyboard	C4735B
HP Multimedia Keyboard	C4742B
HP 2-button Mouse	C3751B
HP Scrolling Mouse	C4736B
HP Cordless Scrolling Mouse	C4740A
HP USB Optical Scrolling Mouse	C4766A
Monitors	
All current HP Monitors (see the HP Monitors Service Handbook)	
Mass Storage	
HP USB Floppy Drive	D9510B
HP USB CD-RW Drive	C4504A
HP USB Compact Flash Reader	P1977A
HP e-pc Hard Drive Tray	P1584A
Multimedia	
HP External Amplified Speakers	P1534A
HP Multimedia Monitor Base	P1535A
HP Standard Headset	D8387A
HP Stereo Headset with Microphone	P1968A
HP USB Webcam	P1978A
Data Communications and LAN Adapter Boards	T. 000 LT
HP 56K V90 USB External Modem	D8384B
HP 56K V90 External USB e-modem	P1979A
HP USB Wireless LAN	P1980A
HP USB Wireless LAN Access Point	P1981A

### Security

HP USB Wireless LAN Access Point for Corporate

HP Master Pass Key System Kit	D6655C
HP Spare Master Pass Key	D6658B
HP ProtectTools Smart Card Reader Kit	D8436B
Kensington Lock	F1645A

### I/O Interfaces

HP USB Hub Accessory Kit D6804A



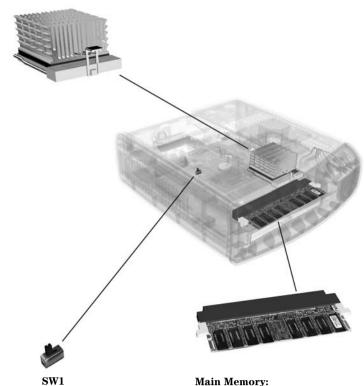
F2135A

### Others

Monitor Stand	F1453A
HP e-pc Extension Kit	P2284A
HP All in 2 Intergation Kit	P1966A
HP e-pc Mounting Bracket	P2290A

### system board, BIOS, and memory

**Processor:** Intel Pentium III or Intel Celeron FC-PGA package with Zero Insertion Force (ZIF) socket.



**System Board Switches:** See the table on the next page.

### Main Memory:

One DIMM socket which supports up to a maximum of 256 MB. Install one 64 MB, 128 MB or 256 MB SDRAM module.



### system board switches (SW1)

Switch	Function	Default
On	Clears CMOS (to reload the <i>Setup</i> program defaults) and passwords	Off
Off	Normal operation	

### **BIOS** history

For the latest BIOS, the flasher utility program, and the BIOS history refer to the HP World Wide Web site.

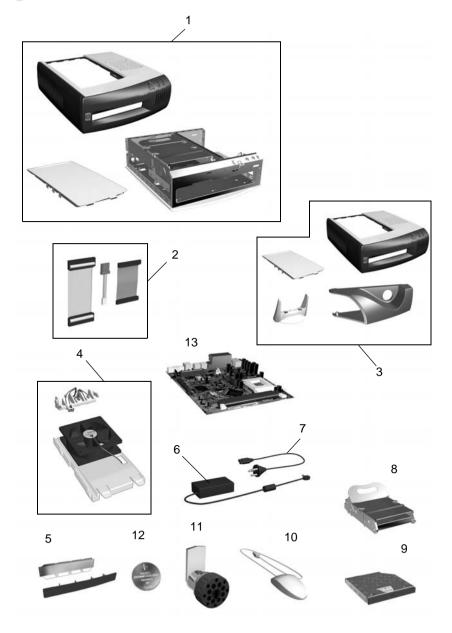
http://www.hp.com/go/e-pcsupport

### beep codes and error messages

Number of Beeps	Error Message	Description
1	Refresh Failure	The memory refresh circuitry on the motherboard is faulty.
2	Parity Error	Parity error in the first 64 KB of memory.
3	Base 64KB Memory Failure	Memory failure in first 64 KB.
4	Timer Not Operational	Memory failure in the first 64 KB of memory, or Timer 1 on the M/B is not functioning.
5	Processor Error	The CPU (Central Processing unit) on the M/B generated an error.
6	Processor Exception Interrupt Error	The CPU generated an exception interrupt.
7	Processor Exception Interrupt Error	The CPU generated an exception interrupt.
8	Display Memory Read/ Write Error	The system video adapter is either missing or its memory is faulty. This is not a fatal error.
9	ROM Checksum Error	The ROM checksum value does not match the value encoded in the BIOS.
10	CMOS Shutdown Register Read/ Write Error	The shutdown register for CMOS RAM failed.
11	Cache Error/ External Cache Bad	The external cache is faulty.



## part numbers





### "return to hp" repair parts list for hp e-pc

Item	Description	Repl. Part Number	Exchange Part Number
1	Box assembly: includes cover assembly, chassis assembly, HDD tray assembly, HDD compartment cover and LED holder assembly	P2294-63010	_
2	Cable kit: includes HDD data cable, HDD power cable and CD-ROM (data+power) cable	5065-2513	_
3	Plastic parts kit: includes cover, HDD compartment cover, stand foot, rubber feet (not shown), port control system, blank serial number label (not shown) and flyer (not shown)	5065-2560	_
4	Status panel, fan and airflow guide	5065-4273	_
5	CD-ROM blank bezel and RFI shield (used on models without CD-ROM drive)	5065-2588	_
6	Power supply	0950-3796 <sup>1</sup>	_
		0950-39791	_
7	Power cord	8120-xxxx1, <sup>2</sup>	_
8	IDE hard disk drive <sup>3</sup> (includes HDD tray)		
	8.4 GB 4500 rpm	D9618-63001	D9618-69001
	10 GB 5400 rpm	P2019-63504	P2019-69504
	20 GB 5400 rpm	P2021-63504	P2021-69504
_	40 GB 7200 rpm	P3624-63501	P3624-69501
9	24X Max IDE slim CD-ROM drive + tray	D9912-63001	_
	assembly 8X Max IDE slim DVD-ROM drive + tray assembly	D9913-63001	_
10	Enhanced mouse with scroll/zoom wheel	C4736-60101	_
	Standard keyboard	$C4739-601xx^4$	_
	Internet keyboard	C4759-601xx4	_
11	HP lock	5064-2645	_
12	Battery type CR2032	1420-0356	_
13	System board	D9896-63013	D9896-69013
not shown	IDE hard disk drive		
	Maxtor 10 GB 5400 rpm	P2665-63003	P2665-69003
	Maxtor 20 GB 5400 rpm	P2666-63003	P2666-69003
	Seagate 40 GB 7200 rpm	P5914-63003	P5914-69003



### "return to hp" repair parts list for hp e-pc

Item	Description	Repl.	Exchange
		Part Number	Part Number
not	24X Max IDE slim CD-ROM drive + adapter	D9900-60025	_
shown	board		
	4×4×24× Max IDE slim CD-RW drive +		
	adapter board	D4398-60201	_

- 1. Replace both the power supply and the power cord.
- 2. Where "xxxx" is the code for your national power cord. See the localization matrix below.
- For optional disk drive information, see the Accessory Service Handbook.
- 4. Where "xx" is the code for your national keyboard. See the localization matrix below.

### "on-site" repair parts list for hp e-pc

Item	Description	Repl.	Exchange
		Part Number	Part Number
2	Cable kit: includes HDD data cable, HDD	5065-2513	_
	power cable and CD-ROM (data+power)		
	cable		
3	Plastic parts kit: includes cover, HDD	5065-2560	_
	compartment cover, stand foot, rubber feet		
	(not shown), port control system, blank		
	serial number label (not shown) and flyer		
	(not shown)	**************************************	
4	Status panel, fan and airflow guide	5065-4273	_
5	CD-ROM blank bezel and RFI shield (used	5065-2561 or	_
	on models without CD-ROM drive)	5065-2588	
6	Power supply	$0950-3796^{1}$	_
7	Power cord	8120-xxxx <sup>1,2</sup>	_
8	IDE hard disk drive <sup>3</sup> (includes HDD tray)		
	8.4 GB 4500 rpm	D9618-63001	D9618-69001
	10 GB 5400 rpm	P2019-63504	P2019-69504
	20 GB 5400 rpm	P2021-63504	P2021-69504
	40 GB 7200 rpm	P3624-63501	P3624-69501
9	24× Max IDE slim CD-ROM drive + tray	D9912-63001	_
	assembly	D 0040 00004	
	8X Max IDE slim DVD-ROM drive + tray	D9913-63001	_
	assembly		
10	Enhanced mouse with scroll/zoom wheel	C4736-60101	_
	Standard keyboard	$C4739-601xx^4$	_
11	HP lock	5064-2645	_
12	Battery type CR2032	1420-0356	_

- 1. Replace both the power supply and the power cord.
- 2. Where "xxxx" is the code for your national power cord. See the localization matrix below.
- 3. For optional disk drive information, see the Accessory Service Handbook.
- 4. Where "xx" is the code for your national keyboard. See the localization matrix below.



### localization matrix for hp e-pc

Localization	Country/Region	Keyboard	Power Cord
#AB0	Taiwan	C4739-60123	8120-6313
#AB1	Korea	C4739-60121	8120-8441
#AB2	China	C4739-60101	8120-8373
#AB4	Singapore - Malaysia	C4739-60101	8120-8699
#AB5	Hong Kong		
#AB7	Greece	C4759-60133	8120-6314
#AB8	Turkey	C4759-60133	
#AB9	Portugal	C4739-60119	
#ABA	USA	C4739-60101	8120-6313
#ABC	Canada	C4739-60102	
#ABD	Germany	C4739-60103	8120-6314
#AB2	Spain	C4739-60101	
#ABF	France	C4739-60105	
#ABG	Australia - New Zealand	C4739-60101	8120-6312
#ABH	Netherlands	C4739-60142	8120-6314
#ABJ	Japan	C4739-60124	8120-6316
#ABM	Latin America (Spanish)	C4759-60108	8120-6313
#ABN	Norway	C4739-60109	8120-6314
#ABP	Switzerland (German)	C4739-60111	8120-6314
#ABQ	Switzerland (French)		
#ABS	Sweden	C4739-60112	
#ABT	Hebrew	C4759-60140	8120-6313
#ABU	United Kingdom	C4739-60113	8120-8699
#ABV	Arabia English	C4759-60120	8120-6314
#ABW	Belgium (Flemish)	C4739-60114	8120-6314
#ABX	Finland	C4739-60112	8120-6314
#ABY	Denmark	C4739-60116	8120-6314
#ABZ	Italy	C4739-60117	8120-6314
#AC8	Argentina	C4759-60108	8120-8367
#ACB	Russia	C4739-60130	8120-6314
#ACH	Latin America (English)	C4759-60101	8120-6313
#ACJ	India English	C4739-60101	8120-6317
#ACQ	South Africa	C4739-60103	
#AKB	Czech	C4739-60105	8120-6314
#AKD	Poland	C4739-60101	
#AKL	Thailand	C4739-60132	8120-6313
#AKV	South America (Spanish)	C4739-60113	8120-8699



### system board parts list for hp e-pc

Description	Repl.	Exchange	
	Part Number	Part Number	
Processors (FC-PGA package):			
Intel Celeron 633/66 128KB L2 cache	P1836-63001	_	
Intel Celeron 667/66 128KB L2 cache	P1837-63001	_	
Intel Celeron 700/66 128KB L2 cache	P1838-63001	_	
Intel Celeron 733/66 128KB L2 cache	P1839-63001	_	
Intel Celeron 766/66 128KB L2 cache	P1840-63001	_	
Intel Celeron 800/100 128KB L2 cache	P1841-63001	_	
Intel Pentium III 800/133 256KB L2 cache	_	D9872-69001	
Intel Pentium III 866/133 256KB L2 cache	_	D9873-69001	
Intel Pentium III 933/133 256KB L2 cache	_	D9486-69001	
Intel Pentium III 1000/133 256KB L2 cache	_	P1579-69001	
Heatsink and clip for Celeron and Pentium	5065-2563	_	
III processors up to 933 MHz			
Heatsink and clip for Pentium III processors	5065-4244	_	
at 1000 MHz			
Main memory modules:			
1 X 64-MB non-ECC SDRAM	P1536-63010	_	
$1 \times 128$ -MB non-ECC SDRAM	P1537-63010	_	
1 × 256-MB non-ECC SDRAM	P1538-63010	_	

### system boards

Motherboard part number	Original platform	Can be used also on	Processor type and frequency range
D9896-6x007 (x=0, 3, 9)	epc s10 / c10	Can be used on e-Vectra (not for C500 & C533)	C566 and above. PIII 600⇒933MHz
D9896-6x013 (x=0, 3, 9)	epc s10 / c10	Can be used on e-Vectra (not for C500 & C533)	C566 and above. PIII 600⇒1000MHz



### software recovery cd-roms for e-pc c10 models

HP Image Creation & Recovery CD-ROM for Windows 2000/NT	5970-0370-xx <sup>1</sup>
HP Image Creation & Recovery CD-ROM for Windows 2000/NT	5970-0420-PO
(Portuguese)	
HP Image Creation & Recovery CD-ROM for Windows 98	5970-0400-xx <sup>2</sup>
HP Image Creation & Recovery CD-ROM for Windows 98	5970-0401-xx <sup>3</sup>
HP Image Creation & Recovery CD-ROM for Windows 98	5970-310-CH
(Chinese)	
HP Image Creation & Recovery CD-ROM for Windows 98	5970-311-JP
(Japanese)	
HP Image Library & Diagnostics CD-ROM	5970-4358

- Where "xx" is the code for your language: DK=Danish, DU=Dutch, EN=English, FI=Finnish, FR=French, GR=German, IT=Italian, JP=Japanese, NO=Norwegian, SP=Spanish, SW=Swedish.
- Where "xx" is the code for your language: DK=Danish, DU=Dutch, EN=English, FI=Finnish, FR=French, GR=German, IT=Italian, NO=Norwegian, SW=Swedish.
- 3. Where "xx" is the code for your language: SP=Spanish, TH=Thai.

### software recovery cd-roms for e-pc s10

HP Assist CD-ROM for Windows 2000 - System Recovery	5970-0430-xx <sup>1</sup>
HP Assist CD-ROM for Windows 2000 - Drivers & Utilies	
Dutch	5970-4450
English	5970-4370
French	5970-4390
Italian	5970-4540
German	5970-4410
Spanish	5970-4430
HP Assist CD-ROM for Windows 98 - System Recovery	5970-0340-xx <sup>1</sup>
HP Assist CD-ROM for Windows 98 - Drivers & Utilies	
Dutch	5970-4440
English	5970-4360
French	5970-4380
Italian	5970-4530
German	5970-4400
Spanish	5970-4420

 Where "xx" is the code for your language: DU=Dutch, EN=English, FR=French, GR=German, IT=Italian, SP=Spanish.

### manuals and documentation for hp e-pc

HP Information CD-ROM	5011-8109
User's Guide	5970-5060
Technical Reference Manual	no number <sup>1</sup>

1. Electronic file available on HP's Web site



# hp e-pc c10/s10 notes:

